In the Claims:

1. (currently amended) A photonic network node comprising:

~~means for demultiplexing an optical signal into channels;~~

photonic switch fabric for forwarding an optical signal comprising a plurality of channels;

means for monitoring the optical signal before and after the photonic switch fabric;

means for protecting channels of the optical signal responsive to the monitoring means;

means for reducing a variance between inputs to the photonic network node by applying a bulk compensation to all channels of the optical signal;

means for demultiplexing the optical signal into the plurality of channels;

means for compensating for individual channel impairment responsive to the monitoring means; and

means for multiplexing a plurality of channels into an output optical signal.

2. (original) A node as claimed in claim 1 wherein the photonic switch fabric includes a plurality of optical switch planes.

3. (original) A node as claimed in claim 1 wherein the means for demultiplexing includes an 1:M demultiplexer.

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

8. (Cancelled).

9. (Cancelled).

10. (original) A node as claimed in claim 1 wherein the means for monitoring includes wrapper readers.

11. (original) A node as claimed in claim 1 wherein the means for monitoring includes channel performance monitors.

12. (original) A node as claimed in claim 1 wherein the means for multiplexing includes an M:1 multiplexer.

13. (Currently amended) A photonic node for multi-vendor and multi-carrier interworking comprising

means for reducing a variance between inputs of an optical signal received at the photonic node by applying bulk compensation to all channels of the optical signal;

means for performing performance monitoring on each one of a plurality of channels of the optical signal; and

means for performing impairment compensation on each one of the plurality of channels of the optical signal responsive to the performance monitoring of each channel ~~compensating~~ coupled thereto.

14. (original) A photonic node as claimed in claim 13 wherein the means for monitoring supports network wide performance and fault management, and the triggering of network wide protection and restoration options.

15. (original) A photonic node as claimed in claim 13 wherein the means for monitoring includes means for triggering of network wide protection and restoration.

16. (original) A photonic node as claimed in claim 13 wherein the means for monitoring includes means for detecting and isolating photonic node specific faults and mis-connects, and means for triggering protection switching to redundant modules when appropriate.

17. (original) A photonic node as claimed in claim 13 wherein the means for monitoring includes photonic node output channel power level compensation responsive thereto.

All amend.

18. (original) A photonic node as claimed in claim 13 wherein the means for monitoring includes photonic node output channel dispersion compensation responsive thereto.

19. (original) A photonic node as claimed in claim 13 further comprising means for interfacing with electrical signaling network nodes.